## **CLAIMS**

## What is claimed is:

1 1. Hompater by bream, comprising	1	1.	A computer syst	em, comprising
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a host processor;

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- an input device coupled to said host processor; and
- a bridge coupled to said host processor, said bridge couples together a first bus and a second bus;

wherein said bridge drives a signal on the first bus if said signal is being actively driven by a device coupled to the second bus, but not if said signal is only being actively driven by a device coupled to the first bus.

- 2. The computer system of claim 1 wherein said bridge includes a comparator to drive said signal, said comparator has one input coupled to a threshold and another input coupled to the signal from both the first and the second bus.
- 1 3. The computer system of claim 2 wherein said threshold is set at a level between the level at
- 2 which a device on the first bus would cause said signal to be driven to and the level at which a
- 3 device on the second bus would cause said signal to be driven to.
- 1 4. The computer system of claim 2 wherein said bridge includes a comparator for each signal
- 2 on each of said first and second buses, each comparator used to drive a signal on one of the buses if
- 3 such signal is being actively driven by a device coupled to the other of said buses, but not if the

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- 4 signal is only being driven by a device coupled to the bus having the signal being driven by the
- 5 comparator.
- 1 5. The computer system of claim 4 wherein the bridge includes a logic gate coupled to each
- 2 comparator, said logic capable of being disabled by an enable signal to disable the bridging
- 3 function of the bridge.
  - 6. The computer system of claim 4 wherein said bridge includes a resistor which causes the voltage level of a signal actively driven by a device coupled to the first bus to be different than when that same signal is actively driven by a device coupled to the second bus.
  - 7. The computer system of claim 1 wherein said first and second buses comprise buses on which more than one device can actively and concurrently drive a signal on the buses.
  - 8. The computer system of claim 1 wherein said first and second buses comprise I<sup>2</sup>C buses.
- 9. A bridge device coupling together a first bus and a second bus, each bus having a plurality of bus signals and each bus being capable of being coupled to a bus device, comprising:
- a plurality of comparators, each comparator comparing the voltage level of a bus signal to a
  threshold, each comparator causing a signal on one of the buses to be driven, each
  comparator having a first input and a second input, a threshold voltage coupled to
  the first input and the second input coupled to a bus signal from both said first and
  second buses.

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- 1 10. The bridge device of claim 9 wherein each comparator causes a signal on one of the buses
- 2 to be driven if that signal is being actively driven by a bus device coupled to the other of said
- 3 buses, but not if the signal is only being actively driven by a bus device coupled to the bus having
- 4 the signal being driven by the comparator.
- 1 11. The bridge device of claim 9 wherein said threshold of each comparator is set at a level
- between the level at which a bus device on the first bus would cause said signal to be driven to and
  the level at which a bus device on the second bus would cause said signal to be driven to.
  - 12. The bridge device of claim 9 wherein the bridge includes a logic gate coupled to each comparator, said logic gate capable of being disabled by an enable signal to disable the bridging function of the bridge.
  - 13. The bridge device of claim 9 wherein said first and second buses comprise buses on which more than one device can actively and concurrently drive a signal on the buses.
- 1 14. The bridge device of claim 9 wherein said first and second buses comprise I<sup>2</sup>C buses.
- 1 15. A method of bridging two buses together, comprising:
- 2 (a) comparing the voltage level of a bus signal coupled to both buses to a threshold level;
- 3 (b) determining which bus is actively driving said bus signal; and
- 4 (c) asserting said bus signal on one of the buses if such signal is being actively driven by

5 the other of said buses.

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- 1 16. The method of claim 15 wherein said buses include a plurality of signals and (a), (b) and
- 2 (c) are performed for each of said signals.
- 1 17. The method of claim 15 wherein said buses comprise I<sup>2</sup>C buses.
- 1 18. A computer system, comprising:
- a host processor; and
  - a bridge coupled to said host processor, said bridge couples together a first bus and a second bus, said bridge includes a means for determining whether a bus is actively asserting a bus signal and driving said signal on the other of said buses.
  - 19. A bridge interconnecting two buses including a plurality of cross-coupled comparator units that determine which bus is actively driving a bus signal or whether both buses are actively driving said bus signal.